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VESICULAR ERUPTIONS OF HANDS

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Vesicular eruptions of the hands are often recurrent and resistant to treatment. They are common and present a problem faced frequently by every physican.

The etiological conceptions have followed the swing of the research pendulum. At first ascribed to food, later to nerves, then to foci of infection, they are now ascribed, in the opinion of most dermatologists, to fungous infections. We feel that there are many causes other than fungi.

The eruption of pompholyx (dyshidrosis, trichophytid, etc.) is usually characteristic, exhibiting deep-seated sago-grain vesicles, rather deeply embedded, occurring along the sides of the fingers and in the palms of the hands, usually being symmetrical. The vesicles resulting from local external irritation or those of eczema are more superficial, tend more to attack the dorsum of the hands, break much more easily, with crusting and oozing, and are more diffuse. There is considerable burning and itching, before the outbreak and after, and the eruption usually renders the skin sensitive to such mild irritants as soap and water.

In considering the etiology, we must ask ourselves these questions: Why is it that fungous infection causes a vesicular eruption that is confined only to hands and feet? What explains a dermatophytosis producing a vesicular dermatitis in certain persons and not in others, or in the same person at different times? If an external irritant explains a case, why are not other regions involved where the skin is certainly more sensitive? What is the explanation of the symmetry of the eruption?

We believe that there are two major factors concerned. Certainly, internal conditions influence the condition. Apparently, the neuro-circulatory-endocrine balance of the patient, the general status of the body and its environmental balance, play a determining part in the eruption. There are many cases where no precipitating or trigger mechanism is to be found by present methods of study. Cases are reported as being caused apparently by nothing more than an emotional storm. Yet many people are subjected to just as severe emotional stress and do not develop the condition. For the present, then, we can only postulate a vague predisposition in some way brought about by the general condition of the patient and it's effect on the local tissue.

The second major factor is that of the precipitating or trigger mechanism. It has been shown in different cases that food (oranges, e. g. Wise) may be the cause, in others that bacterial foci in teeth and elsewhere are operative, and that foci of fungous infection, particularly on the feet, are causative. It is known, and accepted, that external irritation may produce direct vesicular eruptions of any portion of the exposed skin. Strong acids, alkalis, ultraviolet exposures, and extremes of temperature may at times cause vesiculation. Lesser concentrations of irritants acting on the sensitized skin of the hands may produce the vesicular phase of eczema. The direct infestation of the local tissue by fungi, parasites such as scabies, bacteria in impetigo, may produce vesicles by causing acute inflammation.

The response of the skin to the various irritants and toxins is somewhat similar. We con-

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sider here only the vesicular response. The irritant, acting from without, or within, causes a local vascular dilatation with an outpouring of serum into the skin. Forcing its way outward between the cells of the prickle-cell layer, a condition of spongy edema is set up, which soon becomes so marked that the cells are forced aside, the horny layer is lifted up as a roof, and the vesicle formed. In case of external irritants, the vesicles are more superficial and more easily ruptured. When the cause is internal, the vesicles are more deeply-seated and less easily ruptured.

When confronted with a vesicular eruption of the hands, the major diagnostic studies to be made are:

1. HISTORY:
   1. Onset: sudden, gradual, its relation to
      - Seasons
      - Meals, foods
      - Emotional stress or strain
      - Physical activity
      - Exposure to external irritants
        - Chemicals
        - Plants
        - Industrial
   2. Recurrences—possible causes as above
   3. Associated symptoms
   4. Detailed questioning by systems for foci:
      - Gastro-intestinal:
        - Gastritis
        - Colitis
        - Intestinal dysfunction
      - Circulatory
      - Eye, ear, nose, throat, sinuses, teeth, tonsils
      - Genito-urinary
        - Menstrual abnormalities
        - Cervical infection
        - Prostatic infection
        - Bladder and kidney infection
      - Neuro-muscular
        - Excessive activity and tension
        - Fungous infections of the feet
   5. Response to previous treatment.
2. PHYSICAL EXAMINATION:
   1. Maxim—*"In eruptions of the hands, look at the feet."*
   2. Complete physical examination, covering all possible foci in addition to regular procedures.
   3. Study feet carefully for vesicles, scaling between toes, and changes in nails.
   4. Hands—
      Vesicles, type, superficial or deep, easily ruptured or not, distribution palmar or dorsal.
3. LABORATORY:
   1. Remove vesicle roof from feet and hands, soften with 15 per cent potassium hydroxide, and examine with microscope for fungi.
   2. In obscure cases:
      Patch tests for external irritants and sensitivity.
      Scratch tests for food and epidermal sensitivity.
      Trichophytin sensitivity tests.
      X-ray for foci of infection, sinuses, teeth, et al.

The incidence varies. Dermatophytids and dyshidrosis of obscure origin are common on hands, dermatitis venenata (external irritant dermatitis) and direct local dermatomycosis are less common.

4. TREATMENT:
   1. Specific:
      1. Remove irritant or focus of infection if found.
      2. If fungous infection—trichophytin extracts may be used but are still rather unreliable.
      3. If due to poison ivy—injections of the extract intra-muscularly are of great value.
   2. Non-specific:
      1. Local: (for acuteness to chronicity in order named)
         1. Wet dressings of 1-4000 potassium permanganate solution or 1-15 aluminum subacetate solution.
         2. Antiseptic pastes.
         3. Ointments containing sulphur, salicylic acid, ammoniated mercury, or tar.
         4. Avoidance of soap and water. If rubber gloves are advised, cotton gloves must always be worn underneath to prevent maceration.
         5. Soothing creams to protect skin from dirt and moisture.
         6. X-ray only when indicated.

2. General:
    1. Nutritious diet, properly balanced for minerals, bulk, and vitamins, eliminating any suspicious food elements, particularly those indicated by scratch tests.
    2. Calcium administration.
    3. Fowler's solution or small doses of strychnine.

While there are some cases that prove recalcitrant and stubborn, the majority of the vesicular eruptions on the hands respond favorably to intelligent care.

DISCUSSION

Dr. J. H. Crooks, Greenville:

Dr. van de Erve has brought to us one of the most difficult phases, I think, of cutaneous medicine. All of you, I know, have from time to time treated these conditions and found how much trouble they really are, how often they recur in spite of every effort you put forth for proper treatment. You also have found that you can overtreat them, and one of the most difficult things for us to do is to keep our treatment at the minimum strength. Any of these conditions will respond, not always quickly but usually readily, if you will give them some soothing treatment and not use something like salicylic acid, which spreads the eruption.

Oftentimes we do not find the cause of these conditions. Oftentimes we know that the patient has worked with something in his occupation which causes the eruption, but we can not find the causative factor. Often these patients, if you put them in a hospital, if they are bad enough, for a week, or keep them at home, will be improved, only to relapse when they return to work. Many of them are due to fungus infections—Monilia, Trichophyton, etc.

I had a case in a druggist and could not find what the cause was, so I had to go about making a history for him. I took him away from his work, and he improved. When he went back to work the eruption returned. I finally found that his eruption was due to chloral hydrate. He was making up solutions of chloral hydrate.

Sometimes we find cases in school teachers due to chalk. In housewives we sometimes find the eruptions due to cleaning solutions or preparations, strong soaps, insect powders, etc. I have had more cases among textile employees than any other class except housewives. One textile employee was a painter, and I found his eruption was due to Sonoco spirits, which was used as a thinner. I had the whole crew of painters changed back to turpentine as a thinner, and the patient's eruption cleared up. In office workers, in the case of a stenographer, we proved that her eruption was due to ink from her typewriter ribbon. In farmers we have found it due to spraying solution—the arsenic in the spray. One patient we had happens to live in the eastern part of the state, where the season is early—where bulbs blossom early. In her case the juice of jonquil stalks happened to be the cause.

Among beauticians, I suspect the cause to be some of the solutions they handle. One woman was positive to Lux soap, permanent-wave solution, hair dye, and various other things. When she first came to me she had no eruption on her face but had it on her hands. We took her away from her work for a time and cleared it up, but when she went back to work some time later she had the eruption on her face as well as on the hands.

I have had one case in a mortician, who was susceptible to embalming fluid. There have been several cases among physicians in whom we have not been able to prove to what they were susceptible, except one who was susceptible to novocain.

In many cases I really suspect bacterial infection, and any patient who has an eruption on his hands or anywhere else and has a focus of infection should have the focus of infection removed.

We found one patient who was very sensitive to chicken. If she stayed off chicken for two weeks or a month she would get well, but if she would go back to eating chicken she would have a recurrence.

We have had several cases among gasoline handlers, especially those handling the red (ethyl) gasoline.

The greatest percentage of cases has been in housewives—about thirty per cent. A housewife, of course, is subjected to so many irritants that it is very hard to find which one is at fault.

One patient was a dry cleaner and used what is called dry-cleaning solvent. His response was good while he was away from that solution.

Chipman has classified similar eruptions to these Dr. van de Erve has mentioned as dermatophytoses and dermatophytids. He also speaks of recurrent eczematoid eruptions and seborrheic dermatitis, which is often taken for dermatophytid.

In closing, I wish to express my appreciation to Dr. van de Erve for bringing up this subject, and to urge you not to make light of these affections but to treat them very thoroughly, because sometimes these people have to stay away from their work for two or three months at a time, and it is a very important matter to them.

THE QUESTION OF DRAINAGE IN ABDOMINAL SURGERY

By

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Nothing in surgery is more firmly established than is the value of drainage in pyogenic infections. In these conditions our first thought is the securing of adequate drainage, whether it be in the brain abscess, in a sinus, or a soft tissue abscess, an empyema, a bone infection, or elsewhere. The rapid fall in temperature, the relief from pain, and the general improvement in the patient when free drainage is secured, are all so well known as to require no further mention here.

Therefore, when we come to consider the question of drainage in abdominal surgery, where we face infections caused by the same organisms, our answer must embrace two chief issues, namely: first; *can* we drain the peritoneal cavity?; and, second; will our efforts to drain do the patient more harm than good? Our answers to these two questions will determine our attitude toward the subject under discussion, and may vitally influence the welfare of our surgical patients.

In this paper, I have endeavoured to maintain an open mind, and to state as nearly as I can both sides of the question. In order to do this, I have analyzed expressions of opinion from 41 surgeons, giving us what I believe is a fair cross-section of surgical opinion in America, Europe, and Australia.

Let us for a moment consider the peritoneum. The peritoneum is a closed sac forming a covering not only for the abdominal walls, but also for the contained viscera. Until a few years ago the peritoneum was considered as an absorbing membrane only, and perhaps too much stress was laid upon the danger of absorption of toxins in peritonitis. We have now learned that the function of the peritoneum as a secreting membrane, pouring out an exudate in the face of infection, is of vital importance in the presence of infection. The exuded serum and lymph, rich in germ destroying phagocytes is one of Nature's chief defenses in this region. From this exudate are formed the dense walls of fibrin that may either be valuable in walling off infected areas, or, on the other hand, may cause troublesome adhesions, perhaps even leading to intestinal obstruction.

As in other things both surgical and medical, the pendulum of opinion concerning drainage of the abdomen has swung back and forth, with valiant and enthusiastic champions pulling from each side. The campaign in recent years against drainage is nothing new. In 1885 Mickulicz successfully treated a case of perforated small intestine without drainage. So at least for 51 years surgeons have had this questions to fuss about.

Let us now consider some of the arguments against drainage of the peritoneal cavity. One of the first things that brought condemnation to abdominal drainage was the practice of multiple drains, the drains not only in the upper and lower ends of the incision, and in the middle, but also stab drains at the same time, and perhops on both sides of the abdomen, giving the patient a porcupine appearance. This has, I believe, been practically discarded. Naturally, it led to many hernias, also to post-operative ileus and obstruction. The healing process was delayed, and the cost of hospitalization greatly increased.

The experimental work done on dogs by three Chicago investigators has caused considerable adverse criticism of drainage in the abdomen. These men, Drs. Buchbinder, Droegemueller, and Heilman, tried to simulate in the dog the conditions found in the human abdomen in the presence of intestinal perforation, such as we have in ruptured appendix and gun-shot wound cases. They isolated open loops of lower ileum, making end to end anastomosis of the other free ends of the ileum. They reported upon 3 series. In the first group, including 31 dogs, the abdomen was closed and no further operation was done. The mortality was 90.3 per cent. In the second group, consisting of 33 dogs, the abdomens were opened after 24 hours, the open loop of ileum removed, and the abdomen closed without drainage. The object here was to determine what benefit, if any, would be derived from simply removing the focus of infection. The mortality here was only 58 per cent. In the third series, including

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20 dogs, the loop was removed in 24 hours, the wound being drained with 2 glove rubber drains, 5 centimeters in width, one running across the old loop area and into the pelvis, and the other across the same area and up into the upper abdominal area. The mortality in this series was 100 per cent. There are 2 outstanding objections to this experiment being a convincing argument against drainage in the human abdomen. The first is that the drains were run across the focus of infection area into the lower and upper abdomen, thereby carrying infection to other areas. The second objection is that no surgeon, so far as known, has had any such mortality rate following the use of drains in the human being. These authors mention what they call the "Inconsistency between the well known experimental observations of numerous workers and clinical conceptions and treatment of this disease," namely, profuse peritonitis, and they believe it due to 3 factors: 1st., there is still a difference of opinion as to the duration of the effectiveness of drain; 2nd., the idea is still prevalent that some types of drains are more effective than others; and, 3rd., the operator's conception of the type and extent of the peritonitis with which he is dealing is often erroneous. They claim that the character of the exudate has no bearing on effectiveness of the drain. This does not agree with Hertzler and other observers who claim that the more fluid the exudate, the longer drainage will continue. The three authors state further that in rapidly spreading diffuse peritonitis drains of any kind are not only useless, but increase the degree of contamination and the rapidity of spread in the territory beyond the zone of involvement. Although they use this as an argument against drainage, still they stress the great difficulty in differentiating between a local and a general peritonitis, saying that a large abscess is frequently mistaken for a general peritonitis. They state that a drain does not extraperitonealize a zone already the site of a spreading infection. They quote Yates who found that after 6 hours carmine injected at the ensiform cartilege of a dog could not be drained through drains in the peritoneal cavity. Yates said that drainage of the peritoneum is impossible, and that drainage of the peritoneal fluid is depleting, and, third, that you cannot drain away pus and blood.

Dr. Ross Grosshart, of Tulsa, Oklahoma, does not drain. He pours ether in the abdomen after removing the focus of infection so far as possible, and closes the wound tightly. He reports 6 per cent mortality. He claims that the gonococci and colon bacilli, being aerobic, will not multiply well in a closed cavity, and that the aerobic streptococci kills the patient anyway whether drained or not. He claims that ether is a non-irritating antiseptic, and dissolves the capsules of bacteria, lowering their vitality until phagocytical action is established.

Dr. W. Dennis Kendig, of Kenbridge, Va., points out that drains may cause secondary infection, fistulas and hernias, favor ileus, and prolong convalescence. However, he favors drainage under certain circumstances, as we mention elsewhere in this article.

Dr. Alfred J. Trinca, of Australia, considers the question of drainage still a matter of contention, but says that advocates of non-drainage are gradually gaining adherents. He had a mortality of 2.46 per cent in a series of 244 cases of diffuse peritonitis treated without drainage. He considers the use of a drain in the majority of cases of peritonitis as not only futile and unnecessary, but possibly productive of great harm. But, although stating that more cases are being treated without drainage, he says that no appreciable decrease in mortality in appendicitis has been attained in the past 20 years. This author considers the peritoneal exudate in pus cases as a protective leucocytic and serological barrier, and its removal by drainage not only unnecessary but harmful. Then, in the next breath, he somewhat weakens his argument against drainage by stating, "The only fluid which escapes from the tube whilst it is in position is that which entered it during the process of insertion, or that which makes its way at the side of the tube." As evil effects of drains he enumerates the following:—Aggravation of existing peritonitis by the tube, but says that the increased exudate usually remains localized; fecal fistula; damage to omentum; damage to abdominal wall; post-operative hernia; adhesions and obstruction; introduction of organisms from the air; ileus ; and delayed and painful convalescence.

S. Row, a British surgeon, does not advocate peritoneal drainage, but he drains the muscle

layers, as he found wound infection troublesome.

Drs. D. A. Willis and J. M. Mora, of Chicago, claim that "Drainage has no effect on the mortality rate." They find the temperature normal several days earlier if undrained, and hospitalization distinctly shortened. They report but one death in a series of 100 cases of acute suppurative appendicitis.

Having dwelt to some extent upon the arguments used against drainage, we will now consider the other side of the debate as presented by those who favor drainage of the peritoneal cavity.

One of the staunchest advocates of peritoneal drainage is Dr. Robert C. Coffey, of Portland, Oregon. His eminence as a surgeon, which has been augmented by his authorship of the well known operations for bilateral transplantation of the ureters and for radical removal of carcinoma of the rectum, commands attention. He uses the Coffey-Mikulicz drain, an improvement on the old Mikulicz drain, and has named it the "Quarantine Drain." The author states that serious abdominal infection may be cured spontaneously by Nature. Nature, he says, first tries to absorb and eject the offending substances. Her next step is to try to wall off the infection with a barrier, or so-called quarantine. Therefore, Coffey considers that the surgeon must, so far as possible, imitate Nature by first removing the focus of infection, and then strive to protect the healthy tissues by walling them off from the focus area. Mikulicz used an open sac of gauze placed between the free peritoneal cavity and the diseased area, the sac being then tightly packed with a gauze strip. The chief objections to this drain were that the large area of gauze caused too free an extravasation of peritoneal fluid, and that the small piece of gauze coming out of the external wound gave insufficient drainage, and was soon clogged. Also, when the drain was removed, it left a large raw surface that sometimes caused serious hemorrhage, or led to re-infection. These were some of the things that led Clark, of Philadelphia, and Yates, of Milwaukee, to their experiments to prove that drainage should be largely abandoned. Dr. Joseph Price, of Philadelphia, was fond of using the Mikulicz drain, and secured results that were outstanding in that period of surgery. The Coffey quarantine drain substitutes for the Mikulicz gauze sac a sheet, or two or three sheets, of soft, smooth rubber tissue. And for the single long piece of gauze packing a number of gauze wicks are substituted. These wicks, usually ten or twelve in number, are narrow and straight. They are carefully placed in the wound where they will afford the maximum of drainage from the focus of infection. Then a layer of the rubber sheeting is carefully arranged around the bundle of gauze wicks. Then one or more strips of the rubber tissue are placed above the first. This forms a sort of compound cigarette drain. The drain is the same size at the point of exit from the abdominal wound as it is at the bottom of the wound. This, the author claims, is a vital factor in giving adequate drainage. The abdominal wall is drawn rather loosely around this drain. The wicks are removed one at a time one week after operation, and one week later the rubber packing is removed. Coffey claims that this drain is ideal both as a drain and as a quarantine to protect the healthy tissues from the focus of infection. After using this drain for 25 years in various forms of abdominal infection, Coffey says:—"I believe it to be the most important agency that has entered into my surgical practice, whether considered from the standpoint of saving life or reducing morbidity. *It embodies the most fundamental principle connected with abdominal surgery.*"

Buchbinder, Droegemueller, and Heilman, whose experimental work on dogs was described heretofore in this article, state that "One cannot question the necessity for drainage in local peritonitis." They say that the immobility of peritoneal viscera forming the cavity walls prevent encapsulation of the drains.

Dr. J. F. Baldwin, of Columbus, Ohio, reports the successful removal of 6 feet of jejunum, using a cigarette drain in the wound.

Dr. Virgil S. Counseller, in the October, 1935 issue of Surgical Clinics of North America (The Mayo Clinic Number), says "I believe it is a good thing always to put in a drain (in cholecystectomy) because one cannot always tell when the tie on the cystic duct will let go." He claims that the drain does not predispose to post-operative hernia, and it allows the surgeon to discover bile leakage.

Dr. Byron B. Davis, of Omaha, Neb., drains some cases but not the average cholecystectomy case.

Dr. Charles R. Davis, of Detroit, reports 951 cases in which 229 were drained. His mortality in all cases, drained and undrained included, was 3.36 p.c. He had no fecal fistulas. He noticed that muscles once separated by drains do not close tightly quickly after removal of drains. He removes the tube drains on either the day after operation or the following day, and cigarette drains one day later than tube drains. He favors the insertion of a tube drain to the pelvis, and also a cigarette drain to the abscess cavity, or to the site of the appendix. He quotes John B. Deaver as advising not to remove drains until they fall out of the wound of themselves, and similar advice from F. C. Warnshuis. Others advise removal a little at a time, each day.

Dr. Arthur C. Henthorn, of St. Johns, Mich., agrees with Lawson Tait who advised "When in doubt, drain." He says that when the tract is well organized it forms a tract of least resistence for fluids of the infected cavity. He claims that the only real contraindication to drainage is in cases of gastric and intestinal anastomosis.

Dr. W. Dennis Kendig, of Kenbridge, Va., claims 3 advantages for drainage of the abdomen, as follows:—1. The establishment of a sinus down to one small area. 2. The protection of walling off adhesions. 3. The relief of abdominal pressure. He advises drainage when we have, or expect, any of the following:—Necrotic tissue, or a localized focus of infection; intra-abdominal pressure; exposed extraperitoneal, or oozing spaces; or intra-abdominal abscesses. He quotes La Hay as saying that a drain, in order to be effective, must be within 1 or 2 inches of the point of origin of the infection, one exception being the presence of considerable abdominal pressure. The pressure is supposed to aid drainage by preventing early formation of impervious adhesions. Kendig calls the attention to the fact that such expressions as "When in doubt, do not drain," and the reverse, acknowledge doubt in the mind of the speaker. He favors the suction apparatus in removal of fluid from the abdominal cavity, it being less apt to cause injury to the tissues. He says that Wilensky's and Berg's claim that the advisability for or against drainage can be determined at the time by a hasty examination of smears is open to question because it is hard to estimate the virulence of the infection or the resistance of the patient.

Dr. F. D. Kennedy, of Norton, Kansas, continues to drain in certain cases. He says that a drain in the presence of infection is deleterious to peritoneal resistance and should be introduced only to exclude more malign influences. He states that peritoneal drainage must be local, and unless there is something to be gained by rendering an area extra-peritoneal, or by making from such an area a safe path of least resistance leading outside the body, there is, aside from hemostasis, no justification for its use. He believes it is better to put in drainage in the hope that even a few hours of drainage will benefit. He closes by saying that he thinks he will continue to drain free pus cases "more because I think I will sleep better for it than because it is really necessary."

Dr. Edmund H. Mensing, of Milwaukee, calls attention to the fact that most cases of peritonitis start in the pelvis, even those that result from perforating lesions higher up. This can be used as an argument for pelvic drainage.

Drs. Mentzer and Woolsey, of San Francisco, drain only about 30 per cent of cholecystectomies.

Dr. Herbert M. Miller, of Providence, R. I., reports 934 appendectomies with 248 drained cases.

Dr. Alfred J. Trinca, of Australia, already quoted under the discussion against drainage, considers drainage necessary under the following circumstances: First, where the infective focus has not been eradicated; second, in the presence of free fecoliths; third, where we have raw areas; and, fourth, in appendiceal abscesses.

Dr. Owen H. Wangensteen, of Minneapolis, considers drainage in cholecystectomies imperative.

Dr. W. M. Weeden, of New York, uses a Gibson-Mikulicz drain. He reports its use in 455 out of 860 drainage cases. This drain is in the form of a cornucopia made of rubber dam, apex inserted downward, the tip having been removed and one or two holes cut in the side. After removal of the focus of infection

as nearly as possible, the drain is inserted and spread out so as to press against the walls of the cavity. It is then tightly packed with strips of gauze. When he removes the drain on the 3rd. or 4th. day, to use his exact words, it leaves, in the average adult, "a cavity the size of 2 fists surrounded by omentum and loops of intestines." This appears to the average surgeon to be very radical abdominal drainage! The author claims that the temperature and pulse drop almost immediately, and that improvement seems miraculous. In his report on 1588 cases of acute appendicitis, drained and un-drained, he gives a mortality of 4.9 per cent. However, the Gibson-Mikulicz drain gave 14 per cent of hernias, which is not surprising, considering the size of the opening left by the drain.

Drs. D. A. Willis and J. M. Mora, of Chicago, advise drainage where there has been, in later cases, denudation of the tissues, and where fecal contamination has occurred. They found the abdominal incision far more apt to be infected than the peritoneal cavity, and were surprised to learn that they had wound infections in 50 per cent of their undrained cases of ruptured appendix.

Dr. Hustinx advises drainage only where the appendix cannot be entirely removed.

Dr. E. T. Crosson believes in enough drainage material where drainage is indicated.

Dr. H. K. Tuttle reviews 3285 cases, and feels safer with small rubber drains introduced down to the appendix area whenever there is evidence of peritoneal involvement.

Dr. H. Glasscock reports 108 drainage cases, and considers drainage indicated if the appendix has perforated.

Dr. Muller considers drainage of only local importance.

Dr. F. W. Bancroft prefers drainage, but had 15 per cent post-operative hernias.

Drs. Quain and Waldschmidt use drains for about 2 days in acute suppurative cases, and 12 days in gangrenous cases.

Dr. R. M. Harbin reports 818 cases of appendicitis, and prefers drainage when the least bit doubtful, saying that, although it increases morbidity, it decreases mortality. He found that the drained cases required .6 per cent secondary operations and the undrained .4 per cent.

By a study of the opinions of these various surgeons we see that the question of drainage in abdominal surgery is still a live issue. Personally, I believe that in this, as in most other questions, the highway of safety lies midway between the two extremes. We must neither travel with those who put multiple drains throughout the abdomen, and drain without due consideration of indications, nor must we lock arms with those who are so antagonistic to drainage that they close all abdomens without regard to the conditions found.

As stated at the beginning of this article, we must consider two main points; first whether or not we can drain the abdomen, and, second, whether or not our efforts at drainage will do more harm than good. I believe that it has been firmly established that we can drain at least a part of the abdomen. It seems reasonable to believe that drainage, even for a few hours, may be of such benefit to the patient as to spell the difference between recovery and death. I have been struck with the fact that if a wound shows fair drainage after 24 hours the patient has a far better chance of recovery than if the wound has a dry appearance. I have not noticed any special stress laid upon this in the literature. To me it is hard to believe that the very profuse discharge of pus following drainage of the general peritonitis case is entirely from a very small area.

So far as my personal experience goes, and judging from what I have read, the dangers of drainage, as to morbidity and mortality, have been exaggerated by those who are against drainage. The insertion of a soft rubber tube, of rather large caliber, with fenestrations, does not seem to cause any definite harm if removed within a reasonable time. I believe in removing the drain after 24 hours unless there is some indication for leaving it longer. I feel sure that its benefits will far outweigh any possible dangers. Adhesions are apt to form in the abdomen in such cases, and, in fact, in clean cases, whether or not they are drained. As to fecal fistulas, I cannot remember a single case that could in any way be attributed to a drain. Nor have I ever seen a troublesome hemorrhage caused by a drain.

In conclusion, I will say that unless more definite evidence is shown against drainage, I cannot conscientiously cast aside the only means

at our command to aid Nature in one of her chief measures of defense against infections, namely, drainage.

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SOME OF THE FATAL ACCIDENTS INCIDENTAL TO PREGNANCY

By

H. W. de SAUSSURE, M.D., F.A.C.S.
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Charleston, S. C.

The more serious accidents occurring in pregnancy or during labor are hemorrhage, eclampsia and infection. Of the 25,000 gravidae who die annually in the United States, 4000 succumb to hemorrhage, 5000 die from eclampsia and 6000 are the victims of infection. That a large percentage of these fatalities is preventable is the profound conviction of those who have studied this tragic situation. Practically nothing is done to prevent this needless human sacrifice because neither the schools, the profession, nor the public hold the obstetrician and his art in very high esteem, and the care of the pregnant woman is relegated to the young and inexperienced practitioner or, that anachronism of modern medicine, the American midwife.

If the profession will appreciate the pathologic potentialities of obstetrics, and the public pay the child-bearing woman the respect she deserves, prenatal care will take its proper place in preventive medicine, and the midwife pass into the category of economic monstrosities.

There is little doubt that death from hemorrhage, eclampsia, and infection is largely preventable and the responsibility for the present high mortality rate can, in almost every instance, be placed on the obstetrical attendant.

Death from hemorrhage occurs in placenta previa, premature separation of the normally implanted placenta, or abruptio placentae, and postpartum hemorrhage. The incidence of placenta previa is fairly high, the figures given by various authors vary from 1 in 1500 to 1 in 200. It is ten times as frequent in the multi-

Read before the Fifth District Medical Society, Winnsboro, S. C., May 26, 1936.

para as in the primipara—and increases with age and multiparity. The mortality in various series of statistics ranges from 1 to 19 per cent for mothers and 10 to 80 per cent for the babies. The diagnosis of placenta previa is not difficult; given a woman in the last three months of pregnancy with a painless uterine hemorrhage, the recognition of placental tissue over the internal os on vaginal examination leaves no doubt as to the condition present.

You are all familiar with the treatment of this condition and I will only refer to some of the important features for the sake of emphasis and the value of the different methods. The primary object of treatment is to save the woman's life and, if possible, that of the infant.

In marginal placenta previa, hemorrhage usually occurs at the end of the first stage of labor, when rupture of the membranes is usually sufficient. This allows the placenta to retract with the uterus, and the head entering the lower uterine segment produces sufficient pressure to aid in stopping the hemorrhage. When the cervix is fully dilated, the labor should be terminated by forceps or version and immediate extraction.

We now have three methods of treatment—Braxton-Hicks' version, metreurysis, and cesarean section. For a complete description and discussion of these methods I refer you to any modern textbook on obstetrics, and I will only discuss them from the stand point of their practical application and relative value. If the patient has lost much blood, the baby is dead or nearly so, or very premature, Braxton-Hicks' version is preferable, safe, and easy of performance. It is only necessary to bring down one foot with sufficient traction to make the infant's thigh compress the placenta against the cervix to control the hemorrhage. Then let nature complete the job. Under no circumstances follow the version by extraction until the cervix is fully dilated.

Metreurysis was introduced by Maurer and Duhrssen in 1887, because of the high infant mortality of Braxton-Hicks' version. Any of the various inelastic rubber balloons on the market may be used. The great advantage of the bag over Braxton-Hicks' version is the reduction in infant mortality. Where the condition of the mother and child is good, when little blood has been lost, and the child is viable, the results following this method of treatment have justified its application in suitable cases.

Cesarean section in cases of central and partial placenta previa has, in recent years, gained a popularity which is fully justified by the results obtained. In favorable cases cesarean section has a general mortality of 4 per cent; in favorable cases of placenta previa the same rate should be possible and, in addition the infant mortality can be reduced to 5 per cent. In partial and central placenta previa, with the mother in good condition and a living and viable child, there is a positive indication for cesarean section.

With an incidence of 1 in 245 cases and a death rate as high as 50 per cent for the women and 95 per cent for the babies, abruptio placentae is one of the greatest accidents with which we have to deal. In striking contrast to placenta previa, abruptio placentae is a premature separation of the more or less normally implanted placenta. It usually appears later in pregnancy, at or near term; the onset is stormy, and pain precedes or accompanies the appearance of hemorrhage; the abdomen is tender, and the uterus is tense and board-like. The causes are toxemia of pregnancy, chronic nephritis, diseases of the endometrium and, rarely, traumatism. Toxemia is present in from 56.6 to 91.3 per cent of cases.

The treatment is similar to that of placenta previa, except that the indication for prompt evacuation of the uterus is urgent, because complete control of the hemorrhage is not possible before the uterus is empty.

Death from postpartum hemorrhage is rare today. There are 1100 postpartum deaths from hemorrhage reported in this country annually. The more frequent causes of severe or fatal postpartum hemorrhage are laceration of the cervix extending to or beyond the internal os, usually the result of breech extraction or forceps delivery through an incompletely dilated cervix; lacerations of the clitoris or the vaginal bulbs may cause fatal hemorrhage; atony following prolonged labor, or over distention from twins, or polyhydramnios, placenta previa, and abruptio placentae. The treatment is better to anticipate its possibility and prevent its occur-

rence by early correction of the causes of this calamity.

Mauriceau said: "Pregnancy is a disease of nine months duration." The truth of this is evidenced by the minor disturbances of the early months of gestation and the more serious ones of later pregnancy, the most important of which is the toxemia of pregnancy. This usually begins in the last trimester, first evidenced by hypertension and albuminuria and finally, if untreated, culminating in eclampsia.

I do not propose to go into a discussion of the subject except in its relation to the title of my paper. You are sufficiently familiar with the evolution of toxemia to its dramatic climax, eclampsia. Its mortality varies from 5.31 per cent to 45.7 per cent for the mother, and from 3.62 per cent to 42 per cent for the child. Of its causes we know practically nothing; with its tragic termination we are sadly familiar. Our treatment of eclampsia is handicapped by incomplete results, though the convulsions may be controlled, and the hypertension and albuminuria improved, unless the pregnancy is terminated the toxemia persists, and it is only a matter of time when the eclampsia recurs.

Puerperal infection may be defined as a genital infection of the parturient just before, during, or immediately after delivery. In the majority of cases the source of the infection is the attendant, whether physician or midwife. The causes incidental to puerperal infection are faulty technic in the conduct of labor. If the same meticulous care and attention to detail was practised in the delivery-room as in the modern operating room, puerperal infection in obstetrics would be as rare as wound infection in surgery is today.

These accidents of gestation can in a great measure be prevented. With proper prenatal care and periodic examinations of the gravida, edema, rise in blood-pressure, albuminuria, disturbances of vision, headache, and neuralgias, hyperacidity, substernal and epigastric pain, slight vaginal bleeding with or without uterine pain, are unmistakable warnings of impending trouble while there is yet time for palliative treatment, or at least to terminate the pregnancy before the patient's life is sacrificed to inaction and the good intentions with which Hell is paved.

PROGRAM

Fifth District Medical Society, Winnsboro, S. C., Fairfield Inn, 11 A.M., Tuesday, May 26, 1936

Invocation, Rev. G. G. Mayes.

Address of Welcome, Hon. W. A. Robinson, Mayor of Winnsboro.

Subject: Unannounced, Dr. W. P. Beckmon, Columbia, S. C., Director Mental Hygiene Clinic South Carolina State Hospital.

Subject: "Infantile Paralysis," Dr. R. M. Pollitzer, Greenville, S. C., Formerly Professor Pediatrics, Medical College State of South Carolina.

Subject: "Some Fatal Accidents of Pregnancy," Dr. H. W. deSaussure, Charleston, S. C., Associate Professor Gynecology, Medical College State of South Carolina.

Subject: "Management of Fractures From Standpoint of General Practitioner," Dr. Austin T. Moore, Columbia, S. C.

Subject: "Otitis Media—Some of its Complications," Case Report, Dr. Roderick Macdonald, Rock Hill, S. C.

Lunch.

Business Meeting.

Election of Officers.

Adjournment.

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Gastro-Enterology and Proctology
W. T. Brockman, M.D.----------Greenville, S. C.
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JULY, 1936

THE TEACHING OF PHARMACOLOGY AND MATERIA MEDICA IN THE MEDICAL SCHOOL

In our editorial last month we stressed the importance of the new revision of the United States Pharmacopoeia and the National Formulary both of which became official June 1. We mentioned the tendency on the part of many physicians to lose interest in these official guides in the practice of medicine and to resort to the use of proprietaries and specialties. Surveys have been made in many parts of the country including our own state to determine approximately the percentage of prescriptions by the average physicians of these various ingredients. The latest surveys in South Carolina have been made by the Journal and on request by the School of Pharmacy of the University at Columbia and the School of Pharmacy at the Medical College Charleston.

The teaching of Pharmacology, Materia Medica and prescription writing at our State Medical School appears to be on a high plane and very practical. The principles of prescription writing are first taught and from then on each member of the class is required to write two prescriptions daily for the drugs studied the day before. These are corrected and returned. The black board is used quite frequently and the whole class is given a chance to criticize the prescription written. The prescription book used in this course contains a number of typical prescriptions and they are required to re-write them in abbreviated Latin. Great stress is placed on the U. S. P., the N. F. and the N. N. R. preparations. The drugs and preparations are displayed and examined by the student, and not only is the action or pharmacodynamics stressed, but he must know how to order the drug or preparations, or combination of same.

We feel that the whole subject is well handled at our State Medical School under the guidance of the Dean and his Faculty. Dr. W. H. Zeigler, the Dean of the School of Pharmacy has conducted a survey of prescriptions in a number of the leading drug-stores in Charleston and reports the percentages other than U. S. P. and N. F. preparations as follows:

40%
42%
33%
55%
40%
35%
50%
45%
8)340% = 42 1/2 % Total

The survey in Charleston compares quite fav-

orably with that in some other centers, in fact, appears to be much better. Fundamentally the Medical School can do much about the whole proposition and will do so but organized medicine is in position to supplement this effort to a great degree and we believe it a profound duty to undertake it.

PIEDMONT POST GRADUATE CLINICAL ASSEMBLY

The plans have been made for the second annual post graduate course at the Anderson County Hospital, September 8, 9, 10. Every effort will be made to provide three days of practical instruction for the general practitioner. The faculty consists of well known teachers in southern medical schools. The Southeastern Surgical Congress through its South Carolina section will put on a surgical program for one day in cooperation with the Assembly. The attendance last year was well above one hundred and it is expected that there will be a great increase this year over this figure. Efforts will be made to interest the physicians in the nearby states as well as the entire profession of South Carolina. The time selected should be an important factor in promoting a large attendance. The vacation period will have ended then and the extreme heat of summer no longer a dominate factor as a rule.

MEDICAL SOCIETY OF SOUTH CAROLINA

Minutes of the Regular Meeting of the Medical Society of South Carolina, held Tuesday evening, March 24th, 1936, at 8:30 o'clock, at Roper Hospital

The meeting was called to order by the President, Dr. W. Atmar Smith.

Present were: Drs. A. E. Baker, Ball, Beckman, Bowen, Bowers, Burn, Cain, Cannon, Chamberlain, Evatt, Finger, Heidt, Hope, Hoshall, Johnson, Lynch, McCrady, McInnes, Maguire, Martin, Mazyck, O'Driscoll, F. L. Parker, Peery, Prentiss, W. H. Price, Prioleau, W. M. Rhett, Richards, Rudisill, Rutledge, Sams, Scharlock, Scott, J. E. Smith, W. A. Smith, W. H. S. Speissegger, Sughrue, Taft, E. W. Townsend, J. F. Townsend, J. M. Van de Erve, Waring, I. R. Wilson, Robert Wilson, Robert Wilson, Jr.

Guests were: Dr. R. C. Bruce, Greenville; Dr. E. A. Hines, Seneca; Dr. Paul D. White, Boston; Dr. J. A. Shields, Richmond, Dr. Ross, Drs. Zeigler, Kinard, Cardwell, Foster, Martin; R. E. Stoops, E. U. Reed, R. Malcolm, R. W. Wimberly, R. R. Leamer, T. Q. Harbour.

The Minutes of the previous meeting were read and confirmed.

A letter from Dr. L. F. Elston, requesting readmission to the Society was read and referred to the Board of Censors. The Secretary was instructed to obtain any necessary information from the American Medical Association.

A letter from the American Medical Association concerning the distinction between Members and Fellows was received as information.

The President called attention to Chapter V, Section 2, of the By-Laws of the Society concerning the payment of dues.

The Scientific Program was then taken up.

Dr. R. C. Bruce, President of the State Medical Association, was introduced by Dr. Smith. He expressed his pleasure in visiting the Society, and then read an interesting paper on "The State Medical Association."

Dr. E. A. Hines, Secretary of the State Medical Association, after being presented by Dr. Smith, made some complimentary remarks concerning the President. He then made a talk on "The New Pharmacopoeia and Simplified Therapeutics for Every Doctor."

This was discussed by Dr. W. H. Zeigler.

Dr. Cannon then presented to the Society Dr. Paul D. White, of the Massachusetts General Hospital, Boston, who made a talk on "Diseases of the Heart Muscle."

This was discussed by Drs. Cannon, Lynch, R. Wilson, and W. A. Smith. Dr. White replied to the discussion.

The President thanked the several speakers for their talks.

The meeting then adjourned.

Respectfully submitted,

J. I. Waring, M.D.,
Secretary.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M.D., F.A.C.S., CHARLESTON, S. C.

TONSILS AND ADENOIDS

Dr. I. W. Voorhees, The Eye, Ear, Nose and Throat Monthly, June, 1936

Recently, in the morning mail, came a letter which seems fairly to represent what is in the mind of every parent concerning removal of tonsils and adenoids, but which seldom becomes so articulate:

"Dear Doctor:

Our pediatrist, Dr. Blank, referred us to you for the removal of Junior's tonsils, etc.—At examination two days ago, you told my wife that an operation was imperative. Before going ahead with it, I have a few questions to ask. I wish to know the dangers, the probable result, the cost, the hospital arrangements, nursing needs and whether the mother can remain with the child over night. I believe tonsils were put there for a purpose and should be left alone. Don't they die from this operation sometimes? A friend of mine had a tonsillectomy done on his child some months ago (not by you) and the boy had a hemorrhage and a terrible time generally. The father states that after all this, the tonsils are still present. How can this be? I shall await your kind reply.

Yours truly,

JOHN SMITH."

Mr. Smith's letter is of vital concern to parent, surgeon and child. Therefore his letter was answered at length.

(Reply)

Anxious Parent:

I am the surgeon who is to be entrusted with arrangements for the operation on your only son, and with his after-care until well. You could have found a hundred like me within shooting distance of your office. I say this in order that you may not consider me boastful or as one seeking self-aggrandizement. I am trying, merely, to answer your queries.

You feel, of course, a deep anxiety. This is human. I have felt just as you do under like circumstances. But, if the anxiety is yours, the responsibility is wholly mine. This precious son when going down into the valley of unconsciousness, puts his life entirely in my hands. Whatever happens to him during the two weeks from operation to dismissal will be "up to" me. I shall receive the blame for any untoward happening no matter whether it be under my control or not. In other words I am expected to have 100 per cent success. As a surgeon, I have sworn to do all that is humanly possible for those in need of my services, come what may. The only real satisfaction I get out of my profession is to see ailing people get well. If I fail in this case to accomplish what you and I both expect, then I am defeated, and all my training and experience have gone for naught insofar as this patient is concerned. Perhaps you think that your son is only "just another case";—that I do not feel the flesh-and-blood quality of my task;—that I am like an artisan working on a length of pipe or a block of wood. —This is true only insofar as the technical part of the job is concerned; for while I am at work, there must be present no emotional or other disturbing element. But when all is over and the tension of the operating room is relieved, you may see the light of joy not only in a surgeon's face but in the faces of all who have aided and assisted him in the highly important task. Every one of my colleagues everywhere can tell you that there is no surgeon living who does not take his responsibilities to bed with him. While walking in the street or riding in a car or ascending in an elevator, if the surgeon has a very ill patient under his care, he is turning over in his mind various plans for relief of pain, and for completely successful healing.

To you of the public, a surgeon is one who cuts mortal flesh with a knife, and if you are ignorant of his work or do not like him, he is merely a "butcher," the unkindest epithet that can be applied to one who goes about trying to do good. There are many untoward events which may militate against harmonious healing. That is why no physician can every "guarantee" a cure. Perfection no more exists in medicine than in millinery or mining. Fortunately, most incidents which disturb the orderly procedure

in an operating room are trivial, but occasionally they are serious, or even fatal.

I venture to say that a death on the operating table is one of the most shocking and unforgetable experiences in professional life, and more to be dreaded than corporal punishment or public disgrace.

But to get on with the story. You know nothing of my qualifications, and so I must tell you that all surgeons in these days are obliged to go through a prolonged period of training and experience. Years of work in clinics, watching master hands as well as using your own. "Labors of love" done in the name of "sweet charity" have brought a dividend of added experience and greater assurance in attacking surgical problems.

Now, your boy is a mouth breather. This means that he does not breathe through his nose as he should, and when he lies down at night, dust-laden and germ-laden air is inhaled into his lungs, causing a dry throat, coughing and bronchial attacks. Moreover, a lack of proper oxygenation in the lungs, makes for mental dullness, no matter how bright a boy may be by nature.

But, let us suppose that you are going to turn your back on the diagnosis and refuse to believe what both your own physician and I tell you. Then, let us say that out of a clear sky your boy comes home one day walking a little lame. You think he is shamming, but he says his leg hurts him. Well, he has been playing basket-ball at school a great deal, and maybe that accounts for it. When called in, your doctor finds a rapid heart which he thinks is somewhat enlarged. There is a low grade fever of 101 degrees F. The boy has not been eating well for a week, preceding which he complained once or twice about sore throat. An X-ray examination of the leg and chest is made. The leg shows nothing, but the heart is about one-third larger than normal. To bed the boy goes, not for a day or two, but for five long, weary months with a nurse in attendance and an ice bag on the cardiac region for two hours out of every four while awake. There is definite evidence of rheumatic fever. Every consultant who comes in puts his finger, so to speak, directly upon the tonsils as the site of origin of the infection, which is no longer limited to that region only. The scene of action is now centered in the heart. It is inadvisable to remove the tonsils, but even if they were removed during the acute cardiac attack, which is a dangerous procedure, the disease is no longer in the tonsils only, and no operation now will be effective in saving the heart.

This is no mere hypothetical case. Many a little patient has gone through just such an experience and has come out of it with permanent damage to his heart. This means that during his whole life he will never again be allowed to play basketball or tennis or foot-ball or do track running. Life insurance companies will turn him down or if they insure him at all, it will be at a very high premium rate. Here is a "cardiac cripple" who might have been saved from lifelong invalidism.

You claim, like many others, that the tonsils "were put there for some good purpose." Very true, but we are not quite sure of the purpose. After they have taken up and resisted all of the germs they can fight against, they cease to be effective agents of defense and become instead a machine gun "nest" which must be cleaned out if the battle in other sectors is to be fought successfully.

Hemorrhage may and does occur. It cannot be entirely prevented. But with well-trained assistants bleeding is stopped at the table, and the patient is kept there until the operative field is "dry." To be sure, it may recur during the first 24 hours, which explains why the patient must be kept in hospital where the house staff is constantly on duty to care for just such emergencies. After 24 hours, the likelihood of hemorrhage is so minimal that it is safe to allow the patient to go home.

Like many other people, I note that you "hate" the idea of sending anybody to a hospital. This prejudice is not well founded for, if you are really ill, a hospital is the only place where you have the advantage of X-ray, laboratory tests and special technical procedures such as blood transfusion. However, I do agree with you that too many people are sent to a hospital for minor illnesses which could be well taken care of at home. Surgery, whether major or minor, is much more conveniently done in hospital, but mothers sometimes object to hospital rules which prevent their staying with the child over night. But if every mother were allowed to do this, there would soon be as many

adults as children, and this would disturb the smooth working of hospital routine.

You tell me about a friend of yours who said that he had "gone through this thing" with his boy and that he is still a mouth breather. Recurrences do take place in the experience of the very best surgeons, but not ordinarily.

Your friend says that his boy is still a mouth breather. That may be due to habit or to some disease of the nose which can be corrected. Involuntary urination, especially at night, is also common. And so you see that the matter is not so simple as it seems.

The common idea is that almost anyone can remove tonsils and adenoids is true only in a sense, but there are some among us who lack surgical sense.

And now we come to the point you raised which many of us on both sides of the fence, physicians and patients alike, would prefer not to discuss. Many surgeons are so averse to "talking money" that they employ secretaries to fix the fee. The fee can always be arranged to the patient's satisfaction.

It is better, as a rule, to have a child operated upon preceding a vacation period.

WOMAN'S AUXILIARY

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ANNUAL REPORT OF THE PRESIDENT OF THE AUXILIARY TO THE SOUTH CAROLINA MEDICAL ASSOCIATION, APRIL 22, 1936

By Mrs. Clarence E. Owens, Columbia, S. C.

Your State President submits her annual report with mingled emotions of gratitude for the remarkable cooperation with which her efforts have been supported, with gratefulness for the loyalty and understanding accorded her by the members of the South Carolina Auxiliary, each one of whom she is desirous of believing is her friend; with pride that really constructive progress has been made and with joy in her heart that she has been privileged to serve as your President and afforded opportunity to develop a keener understanding of the aims and problems of the Auxiliary and establishing to her own satisfaction an assurance of its value to the Medical Association.

That all of the emotions are justified you have learned from the splendid reports of your State Officers and county Presidents which recounted the fine type of work being done in South Carolina, therefore, it remains for your President to present an account of her personal activities in the administration of your affairs during the past year.

At the Fall Executive Board Meeting, held in Columbia, the President stated her inability to conduct the duties of her office at that time and urged that she be relieved. A canvass in succession was made of the state officers with the outcome that no one was available who would consent to meet the emergency. To avoid confusion and the possibility of another silent year, the Executive Board permitted the President to begin her duties on the first of January with the promise that by concentrated action she would try to accomplish as much in four months as would ordinarily have been prolonged in leisurely fashion over seven. In consequence, the first of 1936 found her earnestly at work with the Corresponding Secretary contacting county presidents.

To them was outlined the major objectives of the year which were the promoting of health education, expansion within each unit as well as within the state, doubling of the Student Loan Fund, and organizing each Auxiliary along lines corresponding to those of the state. Detailed information as to the duties of each chairman was sent with a request for their names. Some of these returns were late coming in, but the results were very gratifying, especially in view of the fact that some memberships are so small as to necessitate each one holding two and sometimes three positions. With the information available each national chairman under whom South Carolina has serving a State Chairman was furnished the name of the latter, the names of the county chairmen and assurances of good wishes and support from our state. A few quotations will suffice to show how well these letters were received. In the News Letter published under the supervision of Mrs. J. P. Simons, Chicago, National Chairman of press and publicity whose husband she proudly asserts is a grandson of Dr. Simons of Charleston, appeared the following:

"The President and members of the Board of the South Carolina Auxiliary have shown a spirit of friendly co-operation toward all the work of the National Auxiliary. In a recent letter the President said: 'Rest assured that you have the best wishes of the South Carolina Auxiliary and the promise of personal co-operation with any project you wish advanced'."

From Mrs. David S. Long, Harrisonville, Mo., National Chairman of Public Relations, "I received your gracious letter of January 22nd, and I appreciate the fine friendship expressed from South Carolina, etc."

From Mrs. S. C. Red, Houston, Texas: "Many thanks for your promptness and for South Carolina's splendid cooperation."

From Mrs. V. E. Holcombe, Charleston, W. Va., National Chairman of Health and Program, who also boasts lineage in South Carolina have come numerous friendly letters of appreciation for the support of her program. Last and best have been those communications from Mrs. J. Bonar White which imbued your President with a longing to secure her attendance as our guest speaker even though *our* gain has been Georgia's loss. The administration presents her presence at this convention as one of its main accomplishments. An excerpt from the News Letter expresses our sentiments:

"It would be a privilege and an inspiration to Auxiliary members to attend the Annual Auxiliary Meeting which will be held at Greenville, S. C. April 21-23. Mrs. J. Bonar White, first Vice-President and Chairman of Organization of the National Auxiliary, will be the guest speaker. The Press Chairman suggests that all Auxiliary members read Mrs. White's article on Auxiliary Organization which will appear in an early issue of the BULLETIN of the AMERICAN MEDICAL ASSOCIATION."

In January to the National and Southern Presidents were sent greetings and assurances of support followed in March by invitations to attend this convention. It is regretted that neither could accept. Programs were sent to them, to the president of the American Medical Association and to all previously contacted national chairmen and many letters of commendation have been received in return.

As an expression of favor to South Carolina your President was extended the chairmanship of the Budget Committee of the Southern Auxiliary but could not serve. The same data which was sent to national chairmen was supplied to state chairmen with a promise of willingness to assist in any manner necessary and with an assurance of confidence in their ability to execute the duties of their offices.

Following an offer to visit any county units where service could be rendered your President spoke on organization before the Ridge Auxiliary, assembled at the home of Mrs. Price Timmerman in Batesburg and found the unit completely organized and functioning actively. An invitation from Mrs. P. M. Temples took her to Spartanburg for its January meeting and an effort which she hopes was successful was made to stimulate interest. Regular attendance has been possible at the Columbia meetings. It is regretted that an invitation to speak on the subject of Flower Arrangement for the benefit of the Student Loan Fund under the auspices of the Sumter Auxiliary could not be accepted and that a necessary trip to Greenville several days prior to its April meeting prohibited a return visit in response to an invitation to attend

the April meeting from the President, Mrs. T. R. W. Wilson.

However, two trips were made to Greenville, the first to attend the Student Loan Fund committee meeting and the second as the guest of Mrs. Wilson for a conference with her and the Convention Chairman, Mrs. J. L. Sanders, to discuss plans for this convention.

As a marked step of progression and one of its outstanding achievements, the administration cites the formation of a new set of rules, necessitated by five years of growth, to govern the use of the Student Loan Fund and a second set to govern the committee controlling the fund. Conducting the duties of the committee will be greatly facilitated by the adoption of these rules. The Fund at the close of the convention at Florence, April 18, 1935, after four years, amounted to $569.45. Following our slogan "Double the Student Loan Fund" on this date, April 22, 1936, it has grown in 1 year to $1083.93. Assisting your chairman of organization, your President went to Newberry, twice organized, twice disbanded, in an effort to interest them again. but failed to furnish sufficient incentive. She went also to Abbeville, delayed in organization while a futile attempt was being made to form a unit in nearby Greenwood in hope of contacting both towns during the same trip, thereby saving time and expense. Your president made desperate personal efforts to hold Anderson and Florence, but was unsuccessful.

A report of the year's work of South Carolina was compiled and forwarded some months ago to the Southern Auxiliary and the one accounting to the National Auxiliary will be sent immediately following this convention. An earlier report would not have given due credit for work done in the state.

The southern section of the News Letter sent out by the National contained an account of interesting work being done in the state. The request for the article came while your state chairman of Press and Publicity, Mrs. Clay Doyle, was in Florida, so it was the pleasure of your President to edit the news items and submit them for publication.

She compiled your programs for this convention. There are some errors, some omissions, hers and the printer's. For these she asks your pardon.

Too much value cannot be placed upon the benefits derived from the space allowed us in the South Carolina Journal by Dr. E. A. Hines, our tried and true friend. The necessity for its full use whenever it is available is evident to all who read the Journal. The President and the Executive Board extend to him sincere thanks for space in the November, January, February, March and April issues and for his continued interest in the affairs of our organization. When the beautiful Sims Memorial was vandalized during the past winter, it was he who brought the matter to the attention of your President who in turn communicated with Mrs. H. M. Stuckey, the Sims Memorial Chairman, with the result that Mr. Alex Salley, the State Historian and your President presented petitions to the Finance Committee of the State Legislature for funds sufficient to cover restoration. A letter from the Clerk of the Committee assured the appropriation in so much as the memorial was presented to the state and is now its property.

It may be of interest for you to know that a close study of conditions in other states which compose the National Auxiliary reveals that South Carolina compares favorably with the large majority. The units and members number about the same as in other states of like size. The programs cover similar territory, the same problems which confront us, confront many others and nearly all have some form of philanthropic interests similar to our Loan Fund.

Since coming to Greenville the pre-convention meeting of the Executive Board has been held and the President's recommendations have been covered by those brought to you and voted upon by the House of Delegates. For your information the following statistics are presented:

1935—Twelve units, one of which, Anderson, was entirely inactive except for the payment of dues for ten members.
The Coastal and Florence Auxiliaries were organized. There were 225 members in the state. Charleston disbanded.

1936—Anderson and Florence have definitely disbanded.
Abbeville has been added so that there

are now eleven units in healthy condition in the state. In support of our Membership Campaign there has been a substantial increase in the units already established totaling 255 or a net gain of 50 members.

Since January 1st, your President has tried to the best of her ability to fulfill the promise for concentrated action made to the Executive Board and any failure to do so has not arisen from an unwillingness to serve. Bear in mind that there are no minutes prior to 1931 to be found, so securing information has been very difficult. If she has measured up to your expectations she will descend from office a very happy person and if she has failed, please be lenient.

To those who have helped make this report possible, go heartfelt thanks. For the Greenville Auxiliary which has supplied a glorious setting for the close of the administration, there is only commendation of the highest order.

And now, will you permit a lapse of speech into a more personal form while I acknowledge with humility and deepest gratitude which brings a lump to my throat the whole-hearted support and many courtesies accorded me by my associates—the members of the Auxiliary to the Columbia Medical Society. For the enthusiastic manner in which they supported my ambition,—by a contribution of $250 to the Loan Fund and a membership drive, resulting in an increase of 19 members, a 100 per cent rating, with the exception of four eligibles—I thank you. For the lovely luncheon at which they entertained the Executive Board after its November meeting—I thank them; the gift of our beautiful convention programs presented in compliment to me touches the innermost recesses of my soul. Could any symbol of friendship make a recipient more humble?

And so, feeling that only the surface has been scratched, I bid you fare-well as President of the Medical Auxiliary of South Carolina, for 1935 and 1936. May an all-kind Providence watch over you until we meet again and direct you along the benevolent way which you are following.

AUTO OXYGEN TENT

To the Editor:

An idea occurred to me the other day and I have thought I would pass it along. Oxygen tents are rather expensive. A better and cheaper one can be had so easily. I think any one can pick up an old automobile body almost anywhere and convert same into a neat little house with little or no expense. Hospitals can sooner or later secure the body of some costly machine and "so"—as Dr. Ochsner used to say have a room though smaller than the patient's at home yet much neater and I believe much superior to the tents which cost money. The oxygen and the oxygen appliances are all that will cost the hospital and patient real money. The old automobile body treated now and then to a coat of paint will live certainly as long as the home and hospital judged by the old fellows we see as a constant eye sore along the highways.

G. P. Neal, M.D.

Greenwood, S. C.

WANTED: Place as office assistant in Doctor's office. Have had experience in meeting people in public offices; can do stenobookkeeping work. Write Faith Clayton, 1509 Lady Street, Columbia, So. Car.

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PATHOLOGICAL CONFERENCE, MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

November 1, 1935
ABSTRACT NO. 299 (26087)
Service of Dr. W. A. Smith

Student J. Gaston (reading):

A 21-year-old negro male, laborer, admitted 4-14-35, died 4-15-35.

History (apparently gotten with difficulty): "Rheumatism" in 1928. Pain and oppression first appeared in chest and stomach 6 months before admission, and has continued. Has had swelling of lower extremities and dyspnoea, unable to elicit duration. Recently discharged from CCC camp because of "heart trouble." past personal history and family history appear irrelevant. Questionable history of lues. Diet adequate.

Examination: Temp. 97, pulse 108, resp. 40, B. P. not obtainable. Of good general stature and fairly comfortable. Pupils pinpoint and do not react to light. Tongue coated, few teeth carious. Tonsils slightly injected, not enlarged. Thorax: Expansion greater on right side. Breath sounds exaggerated in right chest, few rales in right chest posteriorly. Also exaggerated in upper portion of left chest, flatness in apex. Breath sounds diminished in lower left chest, dullness posteriorly on left. Heart: "Markedly enlarged." Systolic murmur at apex. Hear rate rapid, action weak. Abdomen: Distended and tender. Liver margin 4 inches below costal border. "Mass in upper left abdominal quadrant." Dullness in flanks. No edema of extremities. Neurological apparently normal.

Laboratory: Urine—no specimen obtained. Blood (4-15-35): Hb. 103 (D); RBC 5,610,000; WBC 18,000; polys 86 per cent, lymphs 10 per cent, monos 4 per cent. Urea N (4-15-35) 19 mgs. Blood Kolmer and Kline: 4 plus, 3 plus. Culture of fluid from left chest (4-15): negative, both on routine media and for t. b. X-ray of chest (4-15-35): See chart.

Course: Temp. rose to 101.2 one hour after admission, then gradually fell to 96.5. just before death. Pulse rate varied from 95 to 120, each reading recorded with a question mark. Resp. 40, 30, 24, 26, 32. Two other examiners unable to get B. P. Patient ceased to breathe during a subsequent examination. On attempting to inject adrenalin into the heart, purulent fluid was aspirated. Pronounced dead at 12:25 P.M., 4-15-35.

Dr. Robert Wilson (conducting): Mr. Bernstein, will you size up the situation for us?

Student Bernstein: One of the first things noted in this case is the history of rheumatic fever in 1928, and the subsequent appearance of cardiac symptoms. The effect of rheumatic fever upon the heart is well known. On examination the heart was found to be enlarged, but the later note on the abstract of aspiration leads me to believe that there was fluid in the pericardial sac, and that the cardiac enlargement was of pericardial type. The chest findings are probably the result of pulmonary compression by the enlarged pericardial sac. I would interpret the failure to get a blood pressure reading as indicative of myocardial failure. The flatness in the apex makes me suspect a pneumonia there at the time of admission to the hospital. The mass in the upper left abdominal quadrant may be the margin of the liver pressed downward by the pericardial effusion.

The laboratory findings do not help us much. In fact the history is also of little help except for the record of rheumatism. The patient was probably too sick for a complete history to be taken, and he died so soon after admission that a complete work-up could not be done. My impression is that he had a pancarditis of rheumatic origin, and that death was from myocardial failure and from a pneumonia.

Dr. Wilson: The way this abstract is presented leaves some doubt in my mind as to whether the "rheumatism" was actual rheumatic fever. But tell us more about the "rheumatic heart." And how do you explain the pinpoint pupils?

Student Bernstein: His cardiac findings, with a valvular murmur, suggest that he had a

lesion of the mitral valve, and that would probably be of rheumatic origin. The only evidence we have of involvement of the myocardium is the fact that the myocardium was failing. The pericarditis appears to have been a purulent effusion. That would be unusual in rheumatic fever, but I believe that it was also rheumatic.

I do not believe that the pin-point pupils need be correlated with the clinical picture. The probability is that he was given morphine for the relief of pain.

Dr. Wilson: Let's see if anyone agrees with you. Mr. Glenn?

Student Glenn: His history of rheumatic fever seems to me to be fairly clear. And cardiac decompensation in a man of this age might well be on the basis of rheumatic disease of the heart. The note about the aspiration of purulent fluid from the heart leads me to believe that he also had a purulent effusion in his pericardial sac. The pain and the oppression in the chest can easily be explained on that basis. I believe that he also had a pneumonia.

In the laboratory findings, the high hemoglobin and red cell count can be explained on the basis of a failing heart. The leukocytosis can be explained on the basis of the pneumonia or the purulent pericarditis. He was not in the hospital long enough for his temperature curve to be highly significant, but it seems to suggest a severe infection.

Dr. Wilson: Why do you assume a pneumonia?

Student Glenn: The breath sounds were exaggerated on the right, suggesting that there was some loss of functioning tissue in the left lung. The diminished breath sounds, dullness and rales there suggest consolidation. The flatness at the apex is quite hard to explain. Of course the same findings may go with pleural effusion or with atelectasis. As an afterthought, the history of lues, the substernal oppression and pain, the altered pupils and the chest findings could all be explained on the basis of an aneurysm of the aorta, with compression-atelectasis of the lung. I think that pericarditis is a much more likely diagnosis, however.

Dr. Wilson: Mr. Wallace, will you discuss the case?

Sudent Wallace: I agree with what has been said with regard to the chronic heart disease, probably on a rheumatic basis. But a purulent pericarditis is certainly not to be expected in rheumatic fever. A much more common cause of purulent pericarditis is the pneumococcus, extending to the heart from the lung and pleura. While there is nothing in the history to suggest a pneumonia, still there is nothing to make it seem unlikely. As the pericardial fluid increased rapidly in amount it would tend to prevent the heart from filling during diastole, the effect described as "cardiac tamponade," and death would result from circulatory failure. The inability to get a blood pressure reading means that there was no pulse pressure; this would be expected when tamponade became extreme.

I would like to see the x-ray of his chest.

Dr. Wilson: Will you interpret the film for the rest ofus?

Student Wallace: The heart is definitely enlarged and appears bottle-shaped. This tends to confirm the impression of pericardial fluid. There is some hazy clouding of the left apex which might well have been pneumonia.

Dr. Wilson: In Dr. Rudisill's interpretation, as recorded on the chart, he says that the enlargement of the left side of the heart is very suggestive of pericardial fluid, but that the right border of the heart shadow is not as characteristic. He seems rather inclined toward that diagnosis, however.

There are several things about this case that must be considered. While the history is certainly inadequate, there is definite evidence of heart disease. In the face of an inadequate and unsatisfactory history, the examination must be particularly careful. The chest findings suggest pleural effusion rather than pulmonary consolidation. The enlargement of the heart shadow suggests pericardial fluid, and the aspiration further corroborates that. It is concievable that the aspirated fluid came from the pleural cavity; in fact that was the opinion of the interne who aspirated the fluid, and the "chest fluid" recorded on the chart is the one obtained on aspiration. If we decide that pleural and pericardial fluid were present, the background for these two must be considered. The appearance of the fluid is described as "purulent." Rheumatic fever, which could give rise to both pleural and pericardial fluid, would

almost never be purulent, and would hardly appear so. Fluid from a tuberculous pericardium would also not be purulent, but it would appear so, at least is many cases. I do not believe that the fluid was actually purulent, as the culture was negative. The negative culture for tubercle bacilli is of little importance. The vagueness of the history of rheumatic fever also tends to exclude that diagnosis. I believe that a diagnosis of tuberculous pleurisy and tuberculous pericarditis is more likely.

Dr. Lynch: There are two conceptions as expressed by members of the class that I would like to comment on. The first is the expression "purulent effusion." The term "effusion" should only be used in a case of passive accumulations of fluid. When an inflammatory process is meant some such term as "exudation" should be used, as a "purulent exudation."

The second is the use of the term "purulent" itself. That term should not be loosely applied to a cloudy yellowish fluid, but should be reserved for those cases in which it is known that the clouding is due to the presence of leukocytes. This loose usage of terms was one of the reasons for the difficulties in this case.

The fluid was a yellowish fluid with flakes of fibrin in it. It was not a purulent pericarditis, but a tuberculous pericarditis. The proper descriptive term for this fluid is "sero-fibrinous."

There was about 300 cc. of this fluid, greatly distending the pericardial sac. Both visceral and parietal layers of the pericardium were greatly thickened as you can see in the mounted specimen (demonstrating autopsy specimen). Numerous yellow areas of caseation can be noted. The state of "tamponade," as the term has been used here today, so compressed the heart muscle that the fibers appeared microscopically to be small and atrophic. There was some venous congestion in the myocardium, apparently from an inability of the coronary veins to empty. The effect of this would be to impair the nutrition of a heart muscle that is already being driven to the limit to maintain circulation in the face of pericardial tamponade. The inevitable result is circulatory failure and death.

The pericardial fluid so impinged upon the other thoracic contents that the left lung was almost completely collapsed. The pleural covering of the left lung was greatly thickened, and microscopically it also showed evidences of tuberculosis, altho the process was no longer active at the time of death. No doubt there was a tuberculosis of this lung, extensively involving the pleura. The pericardium could then become infected either by direct contact with the pleural covering, or by retrograde infection from the hilar lymph nodes.

The other lung was voluminous and normal. There were adhesions in the mediastinum that held the pericardium firmly in place against the sternum and other adjacent structures; this is the probable reason for the unusual outline of the heart shadow on the right.

Other structures at autopsy showed merely the effect of cardiac failure. The liver was enlarged and greatly engorged with blood. The spleen was about three times the normal size; it was doubtless the mass felt in the left upper abdominal quadrant.